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Subject: Comments Pertaining to Bay Delta Conservation Plan Integration Team, November 21, 2008 Working Draft, Section 3.3 Approach to Conservation: Overview of Key Conservation Measures and their Integration

Ms. King-Moon and Mr. Cain:

The Sacramento Regional County Sanitation District (SRCSD) offers the following comments addressing the reduction of toxic contaminants as one of the multiple stressors on the Delta. Clearly resolving the Delta's issues requires a comprehensive and long-term solution that weighs all impacts and outcomes against the intended benefits.

SRCSD appreciates the recognition that many stressors co-exist and may be impacting the Delta. However, while some of the stressors (e.g. water project diversions, flow manipulations, predation, invasive species, etc.) are known to be impacting the fish populations of the Delta, other stressors (i.e. "toxic contaminants", "ammonia", endocrine disrupting compounds,), which have been heavily regulated by the State and Regional Water Boards over the past several decades, are under renewed evaluation to determine if they have the potential of impacting Delta species or habitat. These potential impacts are currently unproven and will be verified only after further research is completed.

SRCSD has consistently commented on the need for decisions regarding solutions to the Delta's issues be based on objective scientific approaches that identify relevant and cost effective solutions and that demonstrate specific scientific linkages or "cause-and-effect" relationships We have repeatedly enumerated in public forums and comments letters that BDCP documentation about the impact of toxic contaminants, in general, and research results of recent ammonia studies, specifically, should be properly stated. Where

references are made to "recent research", statements should be properly limited and qualified until the results are shared in proper technical forums to allow opportunity for technical evaluation and peer review.

As has been stated in previous correspondence, SRCSD is aware of several different studies relative to the issue of ammonia impacts in the Delta, including but not limited to studies by Dr. Richard Dugdale and Dr. Inge Werner being performed in coordination with the Central Valley Regional Water Board and SRCSD. In the case of Dr. Dugdale's work, the studies deal with possible ammonia inhibition of the Delta food web and have only recently been initiated. Preliminary results in the Sacramento River have not supported Dr. Dugdale's hypothesis that ammonium concentrations inhibit phytoplankton growth. Initial results also do not support other hypotheses that smaller, less valuable algal species are produced in areas where ammonium concentrations exceed Dr. Dugdale's inhibition threshold. This information is derived from the first progress report for Dr. Dugdale's studies in the Northern Delta.

Another related study deals with ammonia toxicity. The Central Valley Regional Water Quality Control Board, UCD (Dr. Werner), and Sacramento Regional County Sanitation District have entered into a working relationship to conduct a study on *The Effects of Wastewater Treatment Effluent-Associated Contaminants on Delta Smelt.* (*The Effects of Wastewater Treatment Effluent-Associated Contaminants on Delta Smelt*, Ammonia Toxicity Sampling and Analysis Plan (Finalized July 28, 2008). This study, which began in March 2008, is intended to identify the potential for adverse effects of wastewater effluent, in particular ammonia, on Delta smelt larvae. (*Id.* p. 3.) Preliminary results derived from bioassays conducted in the summer of 2008 indicate no evidence of ammonia toxicity to Delta smelt in the Sacramento River near the SRCSD discharge.

In addition to ammonia, SRCSD is not aware of any studies that have been performed in the Delta to definitively link toxic contaminants to reductions in Delta fish species populations. Despite that fact, BDCP integration team documents continue to allege, infer and/or state that such linkages occur and seem to provide disproportionate attention to control measures aimed at toxic contaminants or other inputs from Central Valley municipal and agricultural interests. Based upon the above, SRCSD is requesting the following changes to the Section 3.3 document as outlined below.

> Page 2, paragraph 1: The statement that toxic dischargers have contributed to declines in covered fish, wildlife and plant species and other organisms is made without citation to a reference or linkage to scientific evidence. This statement should be eliminated or correctly qualified.
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> Page 2, paragraph five: The statement is made that conservation measures addressing other stressors (including toxic contaminants) are expected to reduce adverse effects on covered species. While potentially true, this statement should be properly qualified to reflect what is actually known and documented to be factual.
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> Page 3, paragraph 3, item 3: The implication is made that reducing the occurrence of toxic contaminants in Delta waterways will reduce direct and indirect effects on covered species. Toxic effects are not based on the presence of potentially toxic materials, but on the concentration of those materials and the duration of exposure of organisms to those concentrations. This generalized statement regarding the occurrence of toxic contaminants is

misleading, since linkage between toxic contaminants and populations of covered species has not been made and is not cited to scientific evidence or specific references in the BDCP draft document. This statement should be modified.

Page 4, paragraph two: The statement is made that the reduction of toxic discharges would result in a healthier, more productive ecosystem, increasing the potential that covered fish species would respond to other conservation measures. Again, this statement is made without citation to references that confirm that discharges are toxic or that modifications of discharges would lead to an improved Delta ecosystem. Without evidence of specific linkages, such statements are misleading and overstate the certainty regarding the effect of conservation measures aimed at modification of local municipal or agricultural discharges.

Page 6, paragraph three: The statement is made that results of recent water quality investigations suggest that ammonia directly (e.g. acute and chronic toxicity) and indirectly (e.g. adverse effects to macroinvertebrates, phytoplankton and other species that reduce food availability) affects covered fish species in the Delta. As stated above, preliminary results from studies by Dugdale and Werner show the opposite. Results from other unidentified studies should be specifically referenced and validated before statements are included in draft BDCP documents.

Page 7, paragraph two: Absent from the discussion of the suggested improvements in the North Delta and Yolo Bypass are the potentially significant negative impacts of increased mercury methylation and higher levels of mercury in Delta fish. This fact should at least be acknowledged in this section which otherwise only addresses the potential benefits of the proposed conservation measures in the North Delta.

Page 9, paragraph three: The statement is made that reductions in ammonia loads from upstream sources are expected to benefit fish and other species in the west Delta and Suisun Marsh. This statement should be eliminated or modified unless supported by valid scientific documentation.

Page 9, paragraph five, item two: The statement is made that water quality in the South Delta will be improved, in part, through reductions in "polluted agricultural and municipal discharges." This generalized statement is again offered without support or specific references to facts linking such discharges to current or future ambient water quality. Additionally, the success of covered fish populations has not been linked generally to ambient water quality or to specific discharges.

Page 10, paragraph four: The statement is made that increased San Joaquin River flows would be expected to reduce the residence time of toxics in the Delta. Citations for this statement should be provided if it is to be included in the draft document.

Page 11, paragraph five, item 2: Again, the generalized and unsubstantiated statement is made that the reduction of inputs of toxic contaminants into Delta waterways would positively affect covered species in the Delta. This statement should either be supported by specific references or modified.

Page 12, paragraph three: This paragraph again discusses the reduction of loads of contaminants from urban and agricultural sources and states that such reductions would improve the quality and quantity of spawning, rearing and holding habitat for covered fish species. This more detailed statement of an alleged linkage between "contaminants" and covered fish species is again offered with no documentation or citation to scientific evidence. This statement should be modified or eliminated if unsupported.

An additional comment SRCSD has relates to additional technical studies that are being proposed by the Integration Team (reference Handout #4 from 11-18-08 Integration Team meeting). It is unclear to us why additional technical studies are being proposed by the Integration Team, separate from the conservation measures being proposed by the various workgroups. For instance, the Other Stressors Workgroup is addressing ammonia as a proposed mitigation measure as Conservation Measure TOCO1: "Reduce the Load of Ammonia in Effluent Discharged from the Sacramento Regional County Sanitation District into the Sacramento River to Less than __ if Warranted Based on Research." The BDCP states in its approach to conservation that they will work with SRCSD and other dischargers to determine any potential direct and indirect effects of ammonia on covered species. It is our understanding from the November 25 BDCP Integration Team meeting that a new technical team to review ammonia issues is being formed and does not include any discharger representatives. SRCSD requests to be included as an active participant in these ammonia issues technical studies.

SRCSD is willing to work with the Integration Team in its ongoing evaluation of integrating various conservation measures, including North Delta isolated facility diversion concepts and ammonia research activities. In the meantime, SRCSD requests that written or oral recommendations to the BDCP Steering Committee be modified as requested in this letter. Should you have any questions please contact me at 916-876-6092, mitchellt@sacsewer.com.

Sincerely,

Terrie L. Mitchell

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